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# United States Department of Agriculture,

## BUREAU OF PLANT INDUSTRY,

### Forage Crop Investigations.

WASHINGTON, D. C.

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#### KUDZU (*Pueraria thunbergiana*).

Kudzu is a large-leaved, woody, leguminous vine, native to Japan, which grows with remarkable rapidity. It succeeds well in every part of the United States where it has been tried and grows in all kinds of soils. Where the summers are warm and moist it grows with great luxuriance. It is a most excellent vine for arbors and porches, for which purpose it is grown in most of the southern cities. It succeeds well, however, as far north as Nova Scotia. The leaves resemble in a general way those of the common bean but are larger and angularly lobed, besides being tougher in texture. Apparently only occasional vines bloom in this country. The blossoms are dull purple-red and hang in clusters. The pods are thin, very hairy, and do not mature in the latitude of Washington. The Japanese utilize kudzu in many ways, growing it especially on rough rocky land or hillsides too steep to be cultivated. The fiber of the stems is used largely to make a sort of cloth known in commerce as "grass cloth." Various other articles of utility, such as portmanteaus, are also made from this fiber. The thick roots are rich in starch of a high quality, which is used especially to make cakes and noodles. In former times it is said that kudzu played an important part in periods of famine. For starch making, the roots are dug after the leaves fall in the autumn or before the buds burst in the spring. The Japanese also make hay from the kudzu vine, especially to feed to sick horses, as it is said that they will eat this greedily when they refuse other feed. It is more generally grown to feed green.

From the limited experimental work that has been carried out with kudzu, it is very promising to plant for grazing, especially on rough or rocky land or steep hillsides that can not be cultivated. It is an excellent vine to plant on hillsides that tend to wash. It is also recommended for planting on land that is too poor to be cultivated with profit. Whether it is desirable to plant it on land that will grow other crops profitably remains to be determined. Being a legume, kudzu will add nitrogen to the soil in addition to the forage it produces. It is possible, too, that the yield of starch from the roots will more than repay the cost of removing them from the land in case this should be desirable. Kudzu may be used either for pasturage or for feeding green. It is recommended especially as a pasture plant, and in using it in this way it is desirable to have two or three separate fields to be browsed alternately.

#### DIRECTIONS FOR PLANTING.

*Seeds.*—The seed of kudzu does not germinate very well, so that the plant is usually propagated by cuttings. If seed is used, it should be planted in a well-prepared seed bed and the plants transplanted after they are well rooted. They should be planted 10 to 20 feet apart. The first season seedlings will produce stems 6 to 12 feet long, and by the end of the second season should entirely cover the ground.

*Cuttings.*—Kudzu is readily propagated by means of cuttings. The joints strike root freely, especially if covered with soil, and such rooted cuttings are easily transplanted. Prof. J. M. Scott, of the Florida Agricultural Experiment Station, planted an acre of kudzu in the spring just before the buds had started, using joints only. Some of these were rooted and others were not, but nearly every one grew. The growth of each vine for the first season ranged from 10 to 25 feet. Kudzu will not reach its full luxuriance of growth until about the third year, when the new vines should grow from 40 to 60 feet in a season, depending on the latitude.

#### FEEDING VALUE.

So far as chemical analyses indicate, kudzu is very nutritious, being comparable to clover and alfalfa. The leaves, however, are considerably tougher. Horses, cows, and sheep eat the green leaves readily. Its actual value as a feed, either for meat or for milk production, remains to be determined by experiment.

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C. V. PIPER.



